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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/695,816	10/24/2000	Ernest F. Hasselbrink, Jr.	SD-8298	4265

7590 05/21/2003

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EXAMINER

THOMPSON, JEWEL VERGIE

ART UNIT

PAPER NUMBER

2855



DATE MAILED: 05/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/695,816	HASSELBRINK, JR. ET AL.
	Examiner Jewel V Thompson	Art Unit 2855
-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --		
<b>Period for Reply</b>		
<b>A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.</b>		
<ul style="list-style-type: none"> <li>- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.</li> <li>- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.</li> <li>- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.</li> <li>- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).</li> <li>- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).</li> </ul>		
<b>Status</b>		
1) <input type="checkbox"/> Responsive to communication(s) filed on ____.		
2a) <input type="checkbox"/> This action is FINAL.                    2b) <input type="checkbox"/> This action is non-final.		
3) <input type="checkbox"/> Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.		
<b>Disposition of Claims</b>		
4) <input checked="" type="checkbox"/> Claim(s) <u>1-25</u> is/are pending in the application.		
4a) Of the above claim(s) <u>5-11, 14, 15, 18-20 and 22-24</u> is/are withdrawn from consideration.		
5) <input type="checkbox"/> Claim(s) ____ is/are allowed.		
6) <input checked="" type="checkbox"/> Claim(s) <u>1-4, 12, 13, 16, 17, 21 and 25</u> is/are rejected.		
7) <input type="checkbox"/> Claim(s) ____ is/are objected to.		
8) <input type="checkbox"/> Claim(s) ____ are subject to restriction and/or election requirement.		
<b>Application Papers</b>		
9) <input type="checkbox"/> The specification is objected to by the Examiner.		
10) <input type="checkbox"/> The drawing(s) filed on ____ is/are: a) <input type="checkbox"/> accepted or b) <input type="checkbox"/> objected to by the Examiner.		
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).		
11) <input type="checkbox"/> The proposed drawing correction filed on ____ is: a) <input type="checkbox"/> approved b) <input type="checkbox"/> disapproved by the Examiner.		
If approved, corrected drawings are required in reply to this Office action.		
12) <input type="checkbox"/> The oath or declaration is objected to by the Examiner.		
<b>Priority under 35 U.S.C. §§ 119 and 120</b>		
13) <input type="checkbox"/> Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).		
a) <input type="checkbox"/> All b) <input type="checkbox"/> Some * c) <input type="checkbox"/> None of:		
1. <input type="checkbox"/> Certified copies of the priority documents have been received.		
2. <input type="checkbox"/> Certified copies of the priority documents have been received in Application No. ____.		
3. <input type="checkbox"/> Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).		
* See the attached detailed Office action for a list of the certified copies not received.		
14) <input type="checkbox"/> Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).		
a) <input type="checkbox"/> The translation of the foreign language provisional application has been received.		
15) <input type="checkbox"/> Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.		
<b>Attachment(s)</b>		
1) <input type="checkbox"/> Notice of References Cited (PTO-892)		
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)		
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.		
4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s) ____.		
5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)		
6) <input type="checkbox"/> Other: _____		



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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
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EXAMINER

ART UNIT      PAPER

10

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

In response to applicant's telephone conversation dated April 30, 2003, regarding the last Office action, the following corrective action is taken.

The period for reply of 3 MONTHS set in said Office Action is restarted to begin with the mailing date of this letter.

A copy of the last Office Action is enclosed.

**DETAILED ACTION**

***Information Disclosure Statement***

1. Acknowledgement is made of the Information Disclosure Statement filed October 24, 2000, which has been made of record and placed in the file.

***Response to Election/Restrictions***

2. Applicant's election with traverse of Group I in Paper No. 7 is acknowledged. The traversal is on the ground(s) that the product can be made by another and materially different process; This is not found persuasive because Group I is drawn to a device for controlling fluid flow in a microchannel and groups II and IV are drawn to a method of shaping and manufacturing; Group I is in a different class and would require a different search than Groups II and IV. Groups I and III are drawn to a device for controlling fluid flow and a rotational flowmeter, which all are in different search areas.

The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 teaches, "...force is pressure or voltage". It is unclear as to how the "force is pressure" and "force is voltage"

Claim 21 teaches "...shaped by the method of claim 16". There is no method claimed in claim 16.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 12, 16, 17, 21 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhargava et al (5,665,568).

**Regarding claims 1 and 25**, Bhargava et al teaches the aspects of the claimed invention, a device for controlling fluid flow in a tube, comprising: a mobile monolithic polymer element (7 and col. 5, lines 3-6), which can be made using any desirable method, disposed in the tube (9); and means for providing a displacing force to control the movement of the polymer element in the tube (col. 3, lines 32-37). Bhargava et al neglects to teach that the tube is a microchannel, however, it would have been obvious to have provided the same results as in the tube of Bhargava et al for the purpose of controlling the flow of the fluid.

**Regarding claim 2**, Bhargava et al teaches the displacing force is pressure (col. 3, lines 32-27)

**Regarding claim 3**, Bhargava et al teaches spaced apart retaining means (8) disposed within the microchannel (figs. 1 and 2).

**Regarding claim 4**, Bhargava et al neglects to explicitly teach that the retaining means comprises a sealing surface, however, in fig. 1 it is shown that the retaining means (8) closes off (or seals) the float in such a way the float cannot move any further down the tube. It would have been obvious to one skilled in the art at the time that the invention was made to have been aware that the retaining means (8) could be used in

the regulating device of Bhargava et al for the purpose of preventing the float from dropping down to the bottom plug of the case, therefore being used as a sealing.

**Regarding claim 12**, Bhargava et al teaches a first (2) and second (9) capillary joined together coaxially (fig. 1), wherein the first capillary has a larger diameter than the second capillary (fig. 1); and the mobile monolithic polymer element disposed in the first capillary (Fig. 1)

**Regarding claim 16**, Bhargava et al teaches a first (2) and a second (4) intersecting tubes (fig. 1), wherein the first tube includes two spaced apart retaining means (8); a mobile polymer element (7) disposed in the first tubes (fig. 1) and moveable between the retaining means to block fluid flow through the second tubes (fig. 1).

**Regarding claims 17 and 21**, Bhargava et al teaches a plurality of tubes (4 and 5) converging at a common intersection (fig. 1), wherein at least one of the plurality is a fluid inlet (4), and wherein the common intersection includes spaced apart retaining means (8) and a mobile polymer moveable between the retaining means to block fluid flow into one or more of the plurality of tubes (fig. 1)

***Claim Rejections - 35 USC § 103***

5. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bhargava et al in view of Furber et al (5,986,554).

**Regarding claim 13,** Bhargava et al neglects to teach that the polymer element consists of a first and second coaxial segments, and wherein the second has a diameter adapted to fit within the second capillary. Furber et al teaches a float which has a first and second segment and the second segment is adapted to fit into the second capillary (fig. 1). It would have been obvious to one skilled in the art at the time that the invention was made to have used the float of Furber et al in the regulating device of Bhargave et al for the purpose of indicating an empty position

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

5,019,678 Templeton et al teaches a fluid switch which includes a movable shuttle enclosed within a bore

4,630,486 Miles et al teaches a flow meter having a float freely movable along the bore

### Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jewel V Thompson whose telephone number is 703-308-6726. The examiner can normally be reached on 7-4:30, off alternate Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 703-305-4816. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3432 for regular communications and 703-305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-1134.

  
jvt  
May 19, 2003

  
EDWARD LEFKOWITZ  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800